Status Update: Water Quality Standards in California

Parameter: Selenium

Status:

- USFWS & NOAA (Services) issued a draft Jeopardy Biological Opinion (BiOp) for California Toxics Rule (CTR) selenium criteria in 2000.
- To avoid a Final Jeopardy BiOp, EPA agreed to develop wildlife criteria using a USGS selenium model, and then amend the CTR to include the new criteria. Parties agreed to develop criteria in phases: Phase 1 for San Francisco Bay/Delta; Phase 2 for rest of CA.
- EPA incrementally funded USGS SF Bay/Delta (Phase 1) modeling between 2003 & 2010; USGS completed modeling of SF Bay/Delta (Phase 1) in Dec 2010.
- Modeling indicates very stringent criteria are required to protect sturgeon, birds, and salmon (all are threatened and endangered species).
- Stringent criteria for sturgeon and birds are due to clam-based food web, which includes highly efficient, bioaccumulating invasive clam species now found throughout SF Bay/Delta.

Milestones:

- R9 is currently drafting a proposed site-specific criteria document for SF Bay/Delta based on USGS modeling, and is working closely with State on reasonable/feasible alternatives.
- CA State Board has agreed to consider adopting SF Bay/Delta criteria in 2013-14, when R9 provides final peer reviewed criteria document.

Projected Dates:

- R9 to complete final draft of site-specific criteria document in ~10 months (4^{th} Q FY12).
- R9 to complete coordination with Services & HQ on criteria document in ~18 months (3^{rd} Q FY13).
- R9 to complete external peer review of criteria document & provide final document to CA State Board in ~30 months (2.5 yrs) (3^{rd} Q FY14).
- When R9 has completed the Phase 1 criteria document, R9/USGS/Services will continue with Phase 2.

Current Draft Selenium Wildlife Criteria Values:

- Ranges to protect T&E species: 0.02–1.0 ug/l dissolved selenium, depending on hydrologic conditions (dry year vs. wet year) and based on 1.8–5.0 mg/kg whole body, fish tissue concentration, depending on species.
- For Comparison:
  Ambient SF Bay/Delta Se concentration ~0.2 ug/l dissolved Se;
  Ambient San Joaquin River Se concentration ~0.7 ug/l dissolved Se;
  Ambient Sacramento River Se concentration ~0.07 ug/l dissolved Se.